ABSTRACT OF THE DISCLOSURE

A plurality of immunofluorescent reactions on the same brain specimen is analyzed and imaged correlatively at the cellular level. Information at a plurality of points on a tissue sample 9 is measured using a photometer 7 while two-dimensionally moving a scanning stage 5 on which the tissue sample 9 is placed. The measured signals are input to a memory 29 and stored therein, and a tissue map is created by obtaining two-dimensional information for the sample 9 from the memory 29. After reacting a reagent A′ specific to a substance A with the tissue sample to be mapped, a distribution image of the reaction areas of the reagent A′ is created by scanning the sample in the two-dimensional directions, and, after reacting a reagent B′ specific to a substance B with the same sample, a distribution image of the reaction areas of the reagent B′ is created by scanning the sample in the two-dimensional directions. These steps are repeatedly performed a necessary number of times, thereby creating distribution images of the reaction areas of different types of reagents on the same sample. A plurality of substances on the same sample 9 can be quantitatively analyzed from values such as the difference between or ratio of the distributions of these substances.